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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,126	07/08/2003	Atsushi Murakami	112049.01	6019
25944	7590	09/22/2004	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			GORDON, RAQUEL YVETTE	
			ART UNIT	PAPER NUMBER
			2853	

DATE MAILED: 09/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

AKC

<b>Office Action Summary</b>	Application No. 10/614,126	Applicant(s) MURAKAMI ET AL.	
	Examiner Raquel Y. Gordon	Art Unit 2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 08 July 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☒ Claim(s) 3-9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. 10/108,394.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>7/8/03 &amp; 8/25/04</u> . | 6) <input type="checkbox"/> Other: _____  |

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1 and 2 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 2, 6, and 7 of U.S. Patent No. 6616255. Although the conflicting claims are not identical, they are not patentably distinct from each other because Murakami et al. teach the every element of the instant invention including:

1. An ink cartridge for use with ink and detachable from an image forming apparatus that forms an image using the ink (claim 6/1), comprising: an ink tank that stores ink (claim 6/1), an outer wall of the ink tank is permeable to light (claim 6/1); and a prism disposed on the outer wall of the ink tank and that contacts the ink, the prism being inclined downwardly with respect to a vertical axis (claim 6/1).
2. The ink cartridge according to claim 1, further comprising: an inner wall disposed inside the ink tank and that divides the ink tank; and a porous member that is accommodated inside of the inner wall, wherein the prism is inclined with respect to the inner wall (claim 2/1).

However, the difference is the prism being inclined downwardly with respect to a vertical axis.

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Nevertheless, in claim 1, Murakami et al. disclose "wherein the detection window is inclined at a predetermined angle with respect to the optical path direction changing member."

Further, in claim 7/1, Murakami et al. disclose "wherein the ink detection window is inclined at the predetermined angle of approximately between 15 and 25 degrees with respect to the optical path direction changing member."

It is the Examiner's position the point of reference disclosed by Murakami et al. is substantially the same position as claimed.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Murakami et al. in order to provide optimal positioning to the ink detection window.

### ***Allowable Subject Matter***

Claims 3-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### **Reasons for Indication of Allowable Subject Matter**

The following is a statement of reasons for the indication of allowable subject matter: the following claimed limitations are not taught by the art of record<sup>1</sup>.

3. A printing apparatus that can mount the ink cartridge claimed in claim 2, comprising: an irradiator that irradiates the prism with light; a photoreceptor that receives reflected

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<sup>1</sup> Murakami et al. recited identical claim languages in claim 11, in claim 3. However, in the instant invention, claim 2, dependant from claim 1, is an intervening claim from which claim 3 depends. In contrast, Claim 11 in Murakami et al, depends directly on claim 1. The subject matter included in intervening claim 2, precludes Murakami et al. from teaching the same subject matter with respect to the instant claims. Claims 4-9 depend from claim 3, and are thus also indicated to contain allowable subject matter.

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light of the light irradiated by the irradiator; and a controller that determines whether an amount of the reflected light received by the photoreceptor is larger than or equal to a predetermined amount.

4. The printing apparatus according to claim 3, further comprising a counter that counts and stores the number of times of ink ejection from the cartridge, the counter starts counting when the amount of the reflected light reaches or exceeds the predetermined amount.

5. The printing apparatus according to claim 4, wherein the counter counts up to a threshold value that indicates that the ink tank is empty.

6. The printing apparatus to claim 5, wherein a count value previously stored in the counter is cleared before the counter starts counting.

7. The printing apparatus according to claim 4, further comprising a flag that is turned on when the amount of the reflected light is larger than or equal to the predetermined amount, and that is turned off when the amount of the reflected light is smaller than the predetermined amount, wherein the counter starts counting when the flag is turned on.

8. The printing apparatus according to claim 7, wherein the counter counts up to a threshold value that indicates that the ink tank is empty.

9. The printing apparatus according to claim 8, wherein a count value previously stored in the counter is cleared before the counter starts counting.

### ***Contact Information***

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Raquel Y. Gordon, whose telephone number is (571) 272-2145. The Examiner can normally be reached on M Tu Th and F 8:30-6:00.

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If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, Stephen Meier can be reached on (571) 272-2149. A fax number is available upon request.

Any inquiry of a general nature or relating to the status of this application or proceeding may be directed to the Examiner or Supervisor.

A handwritten signature in black ink, appearing to read 'Raquel Y. Gordon', is written over the printed name.

Raquel Y. Gordon  
Primary Examiner  
Art Unit 2853

September 13, 2004